

New Jersey
Community Stewardship Incentive Program (CSIP)
Practice #11 Tree Planting Guidelines
for the
2013 CSIP Grant



**Community
Forestry**

Department of Environmental Protection
Division of Parks and Forestry
New Jersey Forest Service
Community Forestry Program

CSIP Practice #11 Tree Planting Guidelines for the 2013 CSIP Grant

Introduction

These are the guidelines required to conduct CSIP practice #11 “Tree Planting” under the Community Stewardship Incentive Program (CSIP) Grant for 2013. Communities are required to follow these practices to conduct a tree planting under this grant. Please also follow the grant application when submitting.

Tree Planting Requirements

- 1) Grantee will meet all listed tree planting specifications.
- 2) Grantee agrees to provide and follow a two (2) year maintenance plan insuring that the trees planted will be watered, and cared for properly. Proper care of the trees shall include the minimizing of damage due to mowers and trimmers.
- 3) Grantee agrees to utilize a qualified professional tree expert to oversee the purchasing and planting of trees.
- 4) Grantee agrees to a minimal of two planting inspections, and will have someone knowledgeable of the project available.

1) Planting Plan

A planting plan must be provided and shall include the following parts:

Planting Plan:

- A. Landscape plan
- B. Planting locations per site
- C. Alternate tree locations for potential conflicts
- D. Species, size, quantity & diversity
- E. Tree delivery
- F. Site and tree care
Long-term maintenance plan
- G. Project Supporting Documents
Municipal or site map(s)

- A. Landscape plan:** This narrative will describe the overview of all the planting sites and what the intent of each site’s tree plantings. This should be somewhat general. It must however direct the reader to each site so that anyone can read the landscape plan and find each site.
- B. Planting locations per site:** Per site information needs to have more specific data than the landscape plan including general planting location of the species of trees, size and quantity. The site locations do not need to have every tree mapped, a general location on the site is all that is needed as long as it conveys the intent of the planting and someone could read the description and find the location the trees will be planted on the site. In many cases especially with street tree planting the infrastructure makes it hard to locate the exact spot the tree will be planted until utilities are marked just before planting. In cases like this think about what it would take for someone to come in before or after planting of the trees and that they could find the sight the tree will go or locate the planted trees by using the description. The list of species, size, and quantity can be listed in the narrative or as a separate list; just make sure if the list is separate of the narrative it will be easy to determine what list goes with what site.

- C. Alternate tree locations for potential conflicts:** Grant amendments are very time consuming and taxing process and can delay a project for months. In case a conflict is found at planting site it is encouraged to have some alternate sites listed in the project proposal in case a planting site is later found unusable.
- D. Species, size, quantity & diversity:** Include a tree list indicating the quantity of trees, their scientific and common names (including cultivar name if applicable), the caliper size of the tree (diameter measured 6 inches above ground level), the type of root package (bare root, container or ball and burlap) and any comments specific to tree selection. The list should state that *“The species are the intended species for planting and due to the nurseries’ availability species may not be available or more preferred species of trees may come available. In this case any substitutions outside of the alternate list supplied below will be given for approval of the Forester monitoring the project.”*

If the replanting is to occur in two or more non-contiguous areas, this tree list must be provided separately for each area. The trees selected for the replanting should be of a type (species, cultivar) that will grow successfully to a full mature size in the selected planting sites and will minimize conflicts with the built environment.

It is also a good idea to list some alternates incase certain species cannot be found. If alternates are added to the list it shall explain when and how it will be determined to go to the alternates and how the trees will be divided in this case. The trees must meet ANSI standards for nursery stock.

Community Forestry discourages monoculture plantings. Tree plantings must include a variety of trees species from several different genus and families of trees. This is for the long stability of the tree canopy within the area as a whole. The species diversity and selection needs to be justified in the planting plan.

Additional planting specifications Any planting specifications that go beyond the standard tree planting specifications must be listed. All plantings should note if the tree will be staked and wired or not. Tree will be expected to be replaced if found planted with wire baskets or any other materials that will not decay within two months after planting found in, on or around the root ball.

- E. Tree delivery:** Include how trees will be accepted and rejected at the planting site from delivery. This shall include how trees will also be handled at the nursery from when they are dug up till they are at the planting location for that tree. Delivery and planting damage is not be accepted within reason of the forester inspecting. In transport the trees need to have protection to reduce or eliminate wind damage.
- F. Site and tree care:** Should cover what will be done to manage and care for the site and trees planted. Care should cover how watering, mulching, weed control, stake removal, insect and disease control, and any other important care will be needed.

Long-Term Maintenance Plan: Provide a maintenance plan that includes a two-year maintenance schedule that outlines the work to be performed, the frequency of the work and the department or person who will carry it out. The maintenance schedule should include how the activities will protect, care, and management of the trees. Note you may need to do things at a higher frequency than you list for activities in case of years of drought or high weed growth for examples. If we see an adverse condition we will

request action to correct the issue, and may delay payment until the issue is corrected.

G. Supporting Documents: Required is a list of all planting locations with basic data on the planting locations and shall reference a Site Map and Landscape plan.

Municipal or Site Map(s): Provide a photocopy of a current municipal road map(s) with the planting location(s) or streets to be planted clearly indicated. This map may be of any scale, but at least one major roadway should be present and identified so that the project area(s) can be easily located. The maps and documents should reference the planting plan.

A comprehensive planting plan must be provided and shall include the following components:

- 1) ***Landscape Plan:*** Provide a map or plan showing the specific locations of all proposed plantings on the project site. Include planting requirements and planting type. Please include pictures if they will help describe the project.
- 2) ***Plant Schedule:*** Include a plant schedule indicating the quantity of trees, scientific name of trees, common name of trees, the caliper size (diameter measured 6 inches above ground level) of the trees, and any comments specific to tree selection (**See Appendix D**).
- 3) ***Long-Term Maintenance Plan:*** Each project must have a two (2) year maintenance schedule that outlines the work to be performed, the frequency of the work and who will do the work, with the cost associated (**See Appendix E**).
- 4) ***Information on the tree expert who will oversee the purchase and planting:*** Include a resume or list of qualification that show the selected person will meet the criteria. If this will be contracted after the grant is awarded, please list the minimal criteria that will be used in selecting a tree expert (it will be required to submit the selected tree expert's qualifications prior to work starting on the project including selecting the trees).

2) & 3) Tree Planting Specifications and Long-Term Maintenance

GENERAL

Trees shall be free of damage as the result of handling or transportation. No substitution of plant material is allowed unless permission obtained from the New Jersey Forester. All work shall conform to accepted horticultural practices and meet or exceed the ANSI standards.

SCOPE OF WORK

Work shall consist of:

1. Preparation of areas for planting
2. Furnishing and planting of specified trees
3. Maintenance of plantings

LAYOUT

All trees and shrubs shall be located as shown on the plans supplied. All adjustments to the plan must be authorized by the New Jersey Forester. All plans should be detailed enough that someone could find the locations without a guide. Tree Substitutions will be allowed if proof that the tree species can't be found or a better tree species is found, with approval by the New Jersey Forester.

PROTECTION OF UTILITIES

The plan should cover utility conflicts and mitigation with the tree planting and future tree growth issues that may arise. Species and locations need to be selected to minimize utility/tree conflicts. The plan must include a plan if a conflict is found in the field how the problem will be addressed including having some alternate sites. Also the plan should state who will be responsible for the One-call and utility mark-outs.

WATER

The Plants will be thoroughly watered after planting. The plan must identify how future watering will be conducted and contingencies for droughts or long dry periods.

NURSERY STOCK

Plant species shall conform to those indicated on the site plan, planting list, and should follow standard scientific names, with horticultural names when specific varieties will be used. All landscape nursery stock shall conform to the standard specifications of The American Standard for Nursery Stock sponsored by the American association of Nurserymen, Inc. All trees shall be grown under climatic conditions similar to the job site for a period of not less than two (2) years immediately prior to this project. Trees being planted within municipal right of ways along streets need a minimal caliper of 1.75", this is to reduce tree damage along streets. It is recommended to use an average of 2½" caliper between 2"-3" caliper size class. In any other areas that a smaller caliper will be used, give reasons why and what will aid in the protection of the tree. If the trees will be specified to be greater than 3" caliper specify why.

QUALITY

Plants shall have the habit of growth that is normal for the species or cultivar and shall be sound, healthy, vigorous, free from insects, plant diseases and injuries or damage of any nature. An altered growth habit to reduce conflicts with the surrounding environment or for street tree height is acceptable as long as it is in the planting plan, and well justified. All plants shall be of the grades specified, neither larger nor smaller, without written authorization from the project State Grants Coordinator/Forester. No plants shall be pruned, clipped or trimmed prior to delivery that will not be fully healed before transportation without authorization from the New Jersey Forester. Please be aware of fall dig hazards, salt tolerance (for shore communities) when selecting trees to plant.

All Ball & Burlap (B&B) plants shall have been root pruned at the nursery at least once during the three year period immediately preceding transplanting and at least one year prior to transplanting.

Bare Root and de-balled trees shall show full root growth in all directions out from the main stem. All poor and circling roots should be pruned before planting, and must meet ANSI standards.

Container stock will not be accepted. B&B and Bare Root stock that was started or planted in a container at any point of its life will not be accepted.

All plants must be State Inspected and a copy of the "Certificate of Inspections" issued by the State Department of Agriculture at the point of origin must accompany shipments from each source.

SPECIES SELECTION

Trees shall be selected to meet the size, structure, and needs for the location selected. More than one species must be selected for planting, with justification in the plan of why these species were selected. It is recommended to follow one of two rules when selecting tree species to be planted; the 10:20:30 rule or the willing to loose rule. The 10:20:30 rule is only plant 10% of any one species, only 20% of any genera, and only 30% of any family. The willing to loose rule is only plant what your able to replace of one species and what your willing to loose of one genera in a major event.

SHIPMENT, DELIVERY, INSPECTION, AND ACCEPTANCE

The New Jersey Forester reserves the right to inspect all plant material at its point or origin. Acceptance at the nursery, in which the plant is growing, prior to transplanting, does not preclude rejection at the site for just cause.

The plant material is to be delivered will be covered with a tarp, protected from weather and be adequately packed to avoid breakage, sun scald, windburn, desiccation and other damage during loading and shipment. All measures customary in good trade practices shall be taken to keep the plants in good condition. Documented information on when the tree was dug, and how it was held at the nursery before shipment shall be given to the municipal tree expert and can be presented to the New Jersey Forester upon request. No plants shall be planted until they have been inspected and approved on the site by the municipal tree expert.

All bare root trees shall be dug and shipped during tree dormant periods. The dormant period is after the first major frost after leaf-drop, and before the swelling of the buds. If bare root stock is to be held longer than two (2) days before shipping, or to be held one day after receiving shipment, storage method needs to be mentioned in the plan or contact the New Jersey Forester for approval of such method. Documentation with exact date shall be held on all trees about when that tree was dug, prepped for shipping with perpetration method, shipped, stored, and planted. Trees shall be planted before the dormant period is over, unless a Missouri Gravel Bed System or similar systems is used then trees can be planted after the dormant period. Method that will be used to keep the roots moist and protected must be mentioned in the plan. The roots must be kept moist and never allowed to dry out.

It will be ill advice to plant any plant material that does not meet the requirements of the grant specifications.

TIME OF PLANTING

Trees will be planted from September 1 through June 30. If planting is going to take place from November 30 through March 1, specify how the root ball will be protected from freezing before planting. Note only our Southern municipalities can do winter planting.

PLANTING

Unless otherwise specified within these specifications, all work shall conform to accepted horticultural practices. Plants shall be protected upon arrival to the site by being thoroughly watered and properly maintained until properly planted and watered. Unplanted stock shall be "healed-in" a bed of material approved by the municipal tree expert upon delivery to the site unless they will be planted within four (4) hours after delivery.

All trees shall be planted in pits 2 times the diameter of the rootball or large enough in diameter than the soil can be properly tapped down on all sides of the root-ball and the soil 2 time the

diameter of the root ball is radially spaded. The depth of the pits shall be at the proper depth so that the root flare is at the level of the neighboring ground in a level planting area. On slopes the tree will be planted so that the top of the root ball after the root flare is exposed is at the same level of the adjacent highest point of the hole. The tree shall be centered in the hole and then back filled one half the depth of the soil ball with topsoil. The backfill shall be lightly but thoroughly tamped and well watered. The remainder of the hole is then to be backfilled with topsoil to a depth that after settling will assure the tree will be at the same level it was previously growing at in the nursery. The tree will be well watered again before mulch is placed over the surface of the root ball.

GUYING, STAKING AND WRAPPING

Staking is not required with B&B, however stakes will be required for bare-root or de-balled trees. The installation of tree stakes and supporting materials will be done to those trees that the municipal tree expert deems necessary. Stakes shall be of the length and size required to restrict excessive movement by the tree, as ultimately determined by the municipal tree expert. Tie materials shall have some type of protection for the tree, and a minimal of 2 fingers will easily fit on the tension side of the tree ties. Damage caused by wiring may cause a community to not pass an inspection. Material shall be removed after one growth season and before the next spring. Materials must be removed before final inspection.

PLANTING PREPARATIONS

Prior to backfilling, balled and burlapped trees shall have burlap and twine removed from around the trunks, stems and tops of the balls. **Wire baskets shall be removed from the root balls before the trees are set in the planting pit by cutting with any tool that does not destroy or injure the tree roots.** The burlap shall be peeled back off the top of the ball; soil shall be removed to expose the root flare. A municipality can de-ball a tree if they deemed fit to do so.

MULCHING

Shredded mulch will be applied and shall be free of debris and shall be placed around all plantings at the time of planting to a depth no higher than three inches (3") as shown in the planting diagram. Care shall be exercised to keep mulch more than three inches (3") away from the bases of all plantings.

PRUNING

If the trees need any pruning the cut must follow industry standards and be kept to a minimal. A tree may be rejected for improper pruning. Any pruning should be brought to the attention of the New Jersey Forester. Trees selected at the nursery must have fully healed cut and not need pruning to meet specifications. Any damaged branches should be pruned out.

TREE MORTALITY

All plans must designate how trees that did not establish or establish poorly, will be addressed. This might be a replacement of trees with new ones; a municipality to pass final inspection must have 90% of the trees meet minimal standards, and are in good health. If over 1/3rd of a tree's initial tree canopy is dead, even if it established will be not counted towards the 90%. Replacement trees will need to be inspected one year or later after the replanting to count.

4) Tree Expert Requirements

This professional may be a Certified Tree Expert, Landscape Architect, landscape contractor, master gardener, or any other professional in the field of horticulture, arboriculture, or forestry

whose education and/or experience includes proper tree planting techniques. The tree expert qualifications must be included in the project narrative, or expected bid guidelines to hire someone to meet this qualification (once someone is set to be hired a copy of their qualification will be needed).

This person will be responsible for the oversight and signing off in these tree areas.
(See Appendix A)

- Approving the quality & handling of the plant material delivered to the project site
- Approving the size, species, location and sight prep for the trees
- Approving the method of tree installation.

The selected qualified professional will be required to sign a form attesting that the quality of plant material and planting was done according to the New Jersey Community Forestry Program's CSIP Tree Planting Specifications. The form shall be returned by the grantee as part of the final expenditure report documentation. Payment of the balance of the grant shall be disbursed to the grantee when proper project cost documentation and the project approval form has been submitted and approved.

5) Tree Planting Inspections

Tree planting grants will be subject to an initial tree planting inspection. The New Jersey Forest Service's Grants Coordinator/Forester should be given notification of the planting start date 2-3 weeks before the actual planting to setup a time for the inspection. This inspection is to help the communities by finding problems before the trees establish and become harder to correct. Subsequent inspections may be made as needed before the final inspection.

Final inspections will check to see that everything meets requirements. In order to receive a passing inspection, a grantee needs to have 90% tree approval rate or higher and have adhered to the New Jersey Community Forestry Program's CSIP Tree Planting Specifications, and what was stated within the plan.

DOCUMENTS TO SEND TO THE FORESTER BEFORE INSPECTION

All documents shall be received one week before inspection so the inspecting forestry staff can review the information. If the paperwork is not received in time this may lead to a rescheduling of the inspection.

Include:

- An updated tree species and location list (**See Appendix C**)
- List of concerns and issues
- Expenditure expense summary report with all state grant expenditures, with in-kind and cash combination towards the project. At the inspection please have all relevant invoices, expenditure receipts, and match justifications ready for submission with grant agreement Attachment C signed by the CFO.

PASSING A TREE PLANTING INSPECTION

Given that the grantee passes the initial tree planting inspection and submits the necessary paperwork, then a maximum payment of 60% of the grant expenditures will be paid accordingly. One year after the last tree planted or one year after the initial inspection (by what ever has the latest date) a final tree inspection will be conducted. If a passing score is given the remaining funding will be paid according to the invoices and paperwork given.

NON-PASSING SCORE IN AN INSPECTION

Non-compliance with any of the criteria listed in the New Jersey Community Forestry Program's CSIP Tree Planting Specifications may lead to a non-passing score. The forester or staff that gives a non-passing score will give input on what needs to be corrected to receive a pass score. After corrections are made another inspection or documentation will be asked for to assess if the issues were resolved to receive a passing score.

Appendix A

Tree Planting Expert Sign-Off Sheet

As the tree planting expert for the _____ attest that each category individually listed below to the best of my knowledge met the requirements listed for the CSIP practice #11 Tree Plant under the guidelines listed under the 2010 CSIP grant. That it also meets all standard nursery, arboricultural, and forestry best management practices. That it also followed to the planting plan that was submitted to the State of New Jersey.

1. The quality & handling of the plant material delivered to the project site.

Sign: _____ Date: _____

2. The size, species, location and sight prep.

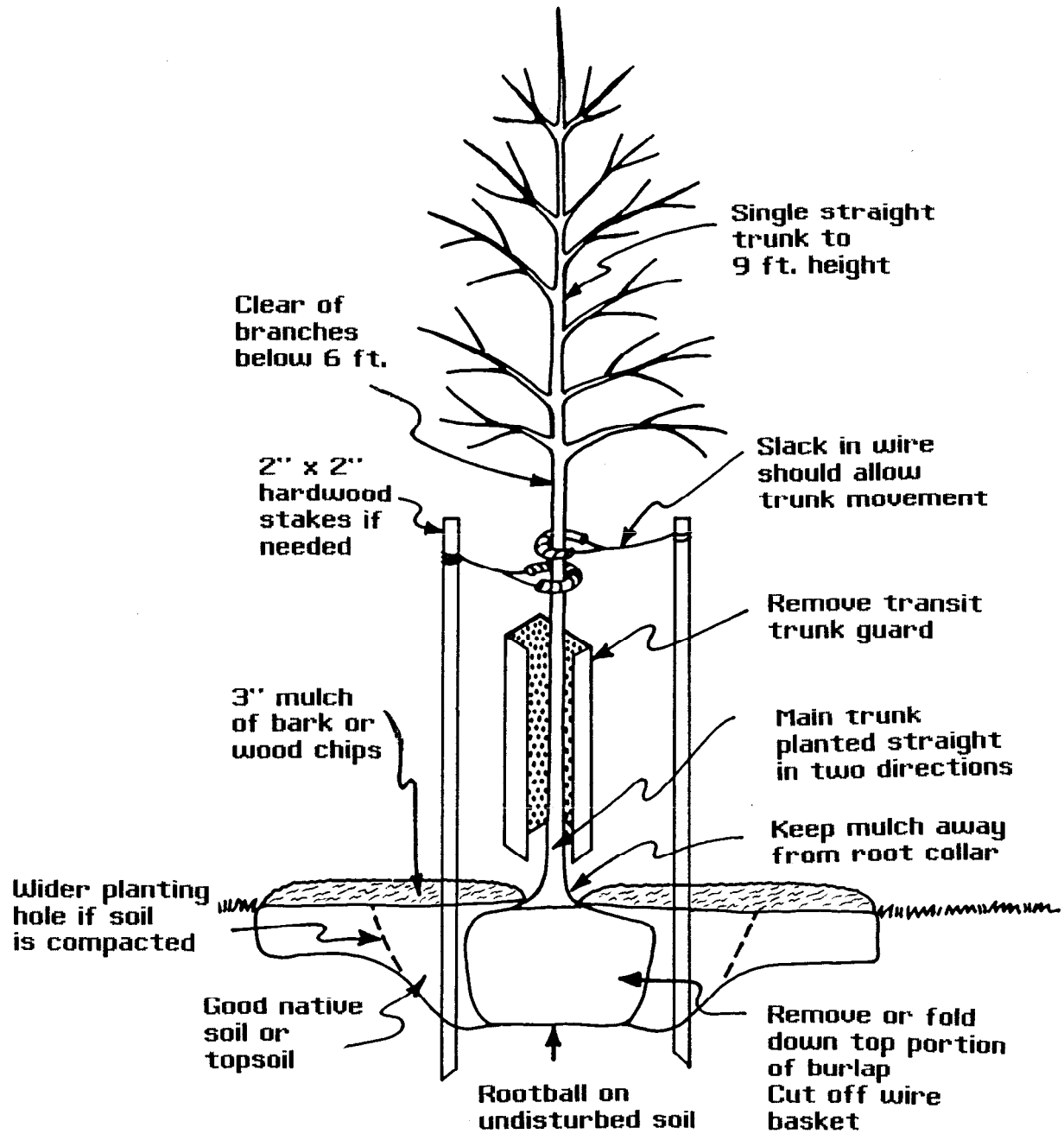
Sign: _____ Date: _____

3. The method of tree installation.

Sign: _____ Date: _____

This document must be submitted with final inspection for final payment.

Appendix B – Planting Diagram



TREE PLANTING DETAIL

Appendix C – Tree Species and Location List Examples

Common Name	Scientific Name	Location	Quantity	Notes
Red maple (Franks Red)	<i>Acer rubrum</i>	1204 Cortlandt Ave.	1	healthy
Sassafras	<i>Sassafras albidum</i>	305 10 th Ave.	2	ok
Red oak	<i>Quercus rubra</i>	3678	1	healthy
Flowering dogwood	<i>Cornus florida</i>	205 Barker Rd.	1	dead
Ginkgo	<i>Ginkgo biloba</i>	1001 Engle Dr.	3	healthy
		Grand Total	8	

Neighborhood: Mr. Roger's								
Markout #	Street	Address	Size	Species	Date	Location Comments		
CSIP10-01	Vermont Ave	1021	S	<i>Prunus cerasifera</i>	5/15/2011	Slight Dieback		
CSIP10-02	Road Island Ave	300	S	<i>Prunus yedoensis</i>	5/15/2011	Has nice flowers planted around it		
CSIP10-03	Maryland Ave	1315	S	<i>Sassafras albidum</i>	5/15/2011			
CSIP10-04	New York Ave	1312	L	<i>Quercus alba</i>	5/16/2011			
CSIP10-05	New Jersey Ave	101 Delaware Ave	L	<i>Quercus rubra</i>	5/16/2011	Pruned broken branch		
CSIP10-06	Road Island Ave	201	S	<i>Cornus florida</i>	5/12/2011			
CSIP10-07	Road Island Ave	201	S	<i>Sassafras albidum</i>	5/15/2011	Pruned at 4.5' will be pruned		
CSIP10-08	Road Island Ave	201	S	<i>Cornus florida</i>	5/12/2011			
CSIP10-09	Maine Ave	1024 New Jersey Ave	S	<i>Prunus yedoensis</i>	5/15/2011	No need to water resident been watering regularly		

Appendix D – Plant Schedule Example

Quantity	Common Name	Scientific Name	Size	Notes
10	Red maple	<i>Acer rubrum</i>	2" – 2 ½"	Pruned at 6'
20	Red oak	<i>Quercus rubra</i>	2" – 2 ½"	
15	Callery pear (Cleveland select)	<i>Pyrus calleryana</i>	2" – 2 ½"	Not Bradford cultivar
12	Hedge maple	<i>Acer campestre</i>	2" – 2 ½"	Pruned at 4'

Please consider using more than four varieties

Appendix E – Long Term Maintenance Plan Example

Description of Work	Year	Department	Hours	Cost*
Tree mulching and stake removal	End of 1st yr	DPW	12 hrs (60 trees @ 5 trees/hr)	\$234.12 (\$19.51/hr for 12 hours)
Tree watering	1 st year	DPW	80 hrs (60 trees @ 15 trees/hr) x 2 people x 10 waterings – June, July, August	\$1,560.80 (\$19.51/hr for 80 hours)
Tree watering	2 nd year	DPW	64 hrs (60 trees @ 15 trees/hr) x 2 people x 8 waterings – July and August	\$1,248.64 (\$19.51/hr for 64 hrs)
Tree pruning	2 nd year	Parks Department	10 hrs (60 trees @ 6 trees/hr)	\$195.10 (\$19.51/hr for 10 hrs)
Disturb mulch and replace where necessary	3 rd year	DPW	6 hrs (60 trees @ 10 trees/hr)	\$117.06 (\$19.51/hr for 6 hrs)

* The hourly rate of \$19.51/hr was used for the salary of DPW workers

